PROCEEDINGS

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JACK RABBITS OF THE LEPUS CAMPESTRIS GROUP.

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The large white-tailed jack rabbit of the Northern Plains was named Lepus campestris by Bachman in 1837. The type specimen came from the plains of the Saskatchewan. Two years later (1839) he described, under the name Lepus townsendi, a closely related species from Walla Walla, on the plains of the Columbia. Waterhouse, in 1848, united the two, placing townsendi as a synonym under campestris. This course has been followed by subsequent naturalists.

An examination of the jack rabbits of this group in the collection of the U. S. Biological Survey shows that *townsendi* is a strongly marked form of the *campestris* group, and that another form, heretofore unrecognized, but here named *sierræ*, inhabits the Sierra Nevada of California. The three forms, with their ranges so far as now known, may be defined as follows:

Lepus campestris Bachman.

Lepus campestris Bachman, Journ. Acad. Nat. Sci., Phila., VII, Pt. 2, 349-352, 1837.

Type locality.-Plains of Saskatchewan.

Range.—Northern Great Plains from Plains of Saskatchewan southward to Kansas, and from Minnesota westward to the Rocky Mountains. From

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Green River Basin in southwestern Wyoming the range spreads westerly over eastern Idaho, northern Utah, and northeastern Nevada.

Characters.—Upperparts yellowish gray; thighs grayish, washed with fulvous, becoming snow-white in early fall; tip of ear margined anteriorly by black, posteriorly marked by a broad squarish black patch changing abruptly to the white below; tail wholly snow-white, some specimens showing a faint trace of a median dorsal line; upper surface of fore leg and fore foot ochraceous, sparingly sprinkled with black hairs; eye surrounded by a broad conspicuous white ring; top of head and front of ears yellowish gray or buffy yellowish, varying to buffy fulvous; pectoral collar buffy yellowish.

Measurements.—Average of 5 specimens from Wyoming: Total length, 615; tail vertebræ, 92; hind foot, 152.

Lepus campestris townsendi Bachman.

Lepus townsendi Bachman, Journ. Acad. Nat. Sci., Phila., VIII, Pt. I, 90-94, 1839.

Type locality.-Walla Walla, Washington.

Range.—Plains of the Columbia, in Oregon and Washington.

Characters.—Upperparts clear gray; thighs and hind legs deep gray; tip of ear not bordered anteriorly by black, the black showing along the edge only; posterior ear-patch narrow, forming only a border, which fades out irregularly into gray below and on the inner side; tail white, with a distinct gray median dorsal line or stripe; top of fore leg and fore foot buffy gray, strongly grizzled with black hairs; white ring around eye not conspicuous, the part below the eye indistinct; top of head and front of ears gray or only faintly tinged with pale buffy fulvous; pectoral collar buffy gray.

Measurements.—Average of 5 from plains of Columbia: Total length, 576; tail vertebræ, 81; hind foot, 147.

Lepus campestris sierræ subsp. nov.

Type from Hope Valley, Alpine County, California, altitude 7800 feet. No. 67,863, female, U. S. National Museum, Biological Survey Collection. September 9, 1894. F. Stephens. Original No. 1889.

Range.—In summer, the Sierra Nevada from Lake Tahoe southward to south of Mono Lake; in winter, adjacent sage-brush slopes on east side of Sierra in Nevada and California.

Characters.—Size large; hind foot exceedingly long (167 mm.); weight of type specimen, 8½ lbs. Similar in general to townsendi, but feet much larger and ears broadly tipped with black on both sides, more broadly even than in campestris, the black covering the tip of the anterior or upper fold in front as well as behind, and forming a large rectangular patch behind; back, thighs, and pectoral collar gray, as in townsendi; upper side of tail

with a conspicuous broad gray median band, tapering to a point and disappearing before reaching tip; white ring around eye broad and conspicuous above and behind the eye, narrow below posteriorly, disappearing anteriorly; upper lip and sides of nose, including patch at base of whiskers, intense buffy fulvous; pectoral collar and flanks gray, the gray of flanks encroaching on belly; top of fore legs grizzled buffy fulvous; wrists and fore feet dirty yellowish white; hind feet white.

Remarks.—The latter part of September, 1900, John Muir and I, after ascending Bloody Canyon to Mono Pass, came upon one of these large hares among the Murray and white bark pines on the west side about two miles below the Pass, and near Dana Creek, which is one of the heads of Tuolumne River. The Paiute Indians at Mono Lake showed me a number of snow-white winter skins of this rabbit, and told me that in winter it comes out of the mountains and inhabits the higher sage-brush slopes on upper Rush Creek, from which locality the Biological Survey has recently secured specimens, through the courtesy of Will J. Farrington, of Mono Lake. All of these specimens unfortunately are in the white winter pelage, though most of them show some dark gray on the head and some pale fulvous on the ears, nose, and fore feet. The ears are strongly washed with pale fulvous. The ear-tips are black on both sides, but the black area is not so large as in the specimen in summer pelage from Hope Valley. In typical campestris also the black ear-tips are smaller in winter than in summer.

Measurements.—Type specimen: Total length, 635; tail vertebræ, 112; hind foot, 167.